



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,310	04/02/2001	William R. Brown JR.	OB-193	9388

7590 10/22/2003

The Gillette Company
Prudential Tower Building
Boston, MA 02199

EXAMINER

COLE, LAURA C

ART UNIT	PAPER NUMBER
----------	--------------

1744

DATE MAILED: 10/22/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,310

Applicant(s)

BROWN ET AL.

Examiner

Laura C Cole

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 is/are allowed.
- 6) ☒ Claim(s) 1-9, 15, 16, 18-23 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 28 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 depends from Claim 22 and Claim 26. Claim 22 requires a tuft with a cross section other than round and is tilted at an acute angle relative to the surface of the head. Claim 26 requires a second tuft having a cross-section that is round. Claim 28 further requires that the round shaped tuft to be at an acute angle to the top surface and "the other tuft" (Examiner interprets this to be the first tuft that has a cross section other than round) to be oriented perpendicular to the surface. It is impossible for the tuft that has a cross section other than round to be acutely tilted and perpendicular.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1744

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Duey, USPN 1,901,230.

Duey discloses the claimed invention including a head (7) comprising a support member which is circular in shape (8), a plurality of tufts of bristles supported at their base by the support member (9 and 10), two of the tufts having their bases adjacent to each other (such as two of the bristle tufts (9)), the two tufts being tilted away from each other at an acute angle relative to the support member (as shown in Figures 1-3).

Further the plurality of tufts includes a third tuft (10) that has a different cross-section than the other two tufts (tuft (10) has a larger diameter and shorter bristles, Figure 2; Page 1 Line 97 to Page 2 Line 2). All of the tufts (9) are tilted along an imaginary circumference.

3. Claims 22, 23, and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Maurer et al., USPN 5,500,970.

Maurer et al. disclose the claimed invention including a neck (1), a support member which is circular in shape (3) indirectly supported by the neck and movable relative to the neck (Column 6 Lines 31-34), a tuft of bristles that has a cross section that is not round (Figure 6 (12a) or the one directly to the left or right of the labeled (12a)) which is supported at its base by the support member (Figure 6), wherein the tuft (the one directly to the left or right of the labeled (12a)) is tilted to an acute angle relative to a top surface (Figure 6), the two tufts having at least one different characteristic being the cross-sectional shape (Figure 6), also including a tuft having a cross section that is oval in shape (Figure 6, the one directly to the left or right of the labeled (12a)), or a

Art Unit: 1744

second tuft perpendicular to a top surface of the head, and the other tuft (the one directly to the left or right of the labeled (12a) is an acute angle to a top surface of the head.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-5, 15, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being obvious over Duey, USPN 1,901,230 in view of Beals et al., USPN 6,308,367.

The applied reference, Beals et al., has a common inventor (Michael Roberts) and a common assignee, Gillette Company, with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a

Art Unit: 1744

showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Duey discloses all elements above, however does not provide a bristle arrangement wherein a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first and second tufts of the pair have a different cross-section or a different cross-section shape.

Beals et al. disclose a toothbrush that has a head comprising a support member (All figures (14)), a plurality of tufts (Figure 6 (28), (32), (34), (36), and (38)) of bristles supported by their base by the support member, two of the tufts having their bases adjacent to each other and being tilted away from each other at an acute angle relative to the support plate (the two tufts being (34) and (38) as shown adjacent in Figures 6

Art Unit: 1744

and 7), wherein both have a cross section that is not round in shape and at least one of these is oval in shape (Figures 6 and 7), a third tuft that has a different cross section than the previous two tufts (Figures 6 and 7 (28)) that is also tilted at an acute angle relative to the support member (Figure 5.)

Further, Beals et al. disclose a plurality of tufts wherein two of the tufts are tiled in substantially the same direction relative to the support member (the two tufts being (36) and (38), see also Figure 5) and having different cross-sections (Figure 6), wherein the first tuft has a different length than the second tuft (Figure 5; Column 3 Lines 4-57), wherein the first tuft has a different number of bristles than the second tuft (Column 3 Lines 4-57 disclose the preferred bristle thickness for all of the bristles to be between 0.005 and 0.009 inches in diameter with a particular surface area, therefore the larger surface areas have more bristles), and the angle of a third tuft (such as tuft (28)) is different from the angle of tilt of the first and second tufts (Figure 5). Beals et al. does not disclose a support member that is circular in shape but does teach that this bristle arrangement is advantageous for cleaning hard to reach teeth (Column 1 Lines 27-42).

It would have been obvious for one of ordinary skill in the art to modify the bristle structure and type of Duey for the one that Beals et al. teach so that the tufts may clean the teeth sufficiently, especially the teeth in the back of the mouth.

5. Claims 6-9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duey, USPN 1,901,230 in view of Cyzer, USPN 3,129,449.

Art Unit: 1744

Duey discloses all elements above, however does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft.

Cyzer discloses a toothbrush with movable elements that discloses a head comprising a support member (All Figures (1)) having a plurality of holes extending completely therethrough (as shown in Figure 1), a plurality of tufts of bristles with each tuft extending through one of the holes and having the brushing end projecting from a first side (Figure 1), means for preventing each tuft from being withdrawn from its hole (Figure 1 (5)), a resilient cushion positioned adjacent a second side of the support member so that the tuft can contact the cushion (cushion is Figures 1 (7) and 3 (7a)) so that each tuft is able to oscillate and rotate (Column 2 Line 45 to Column 2 Line 51). The preventing means is a thickened portion at the second end of each tuft being larger than the hole so as to not be pulled through (Figure 1 (5) or Figure 3 (6) is the thickened portion.) Two of the tufts are tiled away from each other at an acute angle relative to the support member as they rotate and oscillate about the axis (Column 1 Lines 22-26). At least one of the tufts has a cross section that is an oval shape (Figure 5).

It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Cyzer discloses so that excess force or friction is not transmitted to the user's gums or teeth.

6. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duey, USPN 1,901,230 in view of Berl et al., USPN 4,694,844.

Art Unit: 1744

Duey discloses all elements above, however does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft.

Berl et al. discloses a toothbrush having a head that comprises a support member that has a plurality of holes (Figure 3 the support (4) and holes (8)), a plurality of tufts of bristles extending through the holes (Figure 1 (12)), means for preventing each tuft from being withdrawn from its hole being a thickened portion at the second end of the tuft and being larger than the hole (Figures 1-6 (14)), and a resilient cushion adjacent a second side of the support member (Figures 1-10 (18)).

It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Berl et al. teach so that excess force or friction is not transmitted to the user's gums or teeth.

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duey, USPN 1,901,230 in view of Leira et al., USPN 2,935,755.

Duey discloses all elements above, however does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft.

Leira et al. discloses a toothbrush having a head that comprises a support member that has a plurality of holes (Figures 3, 5, and 6 (26)), a plurality of tufts of bristles extending through the holes (Figures 1-6 (5)), means for preventing each tuft from being withdrawn from its hole being a thickened portion at the second end of the

Art Unit: 1744

tuft and being larger than the hole (Figure 6 (28)), and a resilient cushion adjacent a second side of the support member (Figures 5-6 (20)).

It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Leira et al. teach so that excess force or friction is not transmitted to the user's gums or teeth.

8. Claims 1-5, 15, 18, and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Duey, USPN 1,901,230 in view of Bojar, USPN D434,565.

Duey discloses all elements above, however does not provide a bristle arrangement wherein a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first and second tufts of the pair have a different cross-section or a different cross-section shape.

Bojar discloses a toothbrush head that has a support member and a plurality of tufts supported by the support member, having tufts adjacent to each other that are tilted away from each other (the groups of elongated tufts of bristles on that make up the portion on the lower half of the toothbrush head) at an acute angle to the support member, at least one of these tufts cross sections is not round (again, the elongated tufts are more of an oval or ellipsoid), and the plurality of tufts include a third tuft that has a different cross section (the round tufts that are on the top portion of the toothbrush head.) See all of the figures, especially Figures 10 and 11.

Bojar further discloses a toothbrush head that comprises a support member and a plurality of tufts of bristles supported at the base by the support member, a pair of tufts tilted in substantially the same direction relative to the support member, and a first tuft

Art Unit: 1744

having a different cross-section than the second (the first tuft is one of the elongated tufts and the second tuft is one of the round tufts that are adjacent to the elongated tuft and situated on the outer perimeter of the head (Figures 5, 6, and 8 show that they are in substantially the same direction.) Bojar also discloses that the first tuft has a different number of bristles than the second tuft as they appear in the figures. A third tuft is included that is angled differently than the angle of tilt of the first and second bristles, the third tuft being the tuft on the center top most portion of the head that appears to be perpendicular.

It would have been obvious for one of ordinary skill in the art to modify the bristle structure and type of Duey for the one that Bojar teaches so that the tufts may clean the teeth sufficiently, especially the teeth in the back of the mouth.

9. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maurer et al., USPN 5,500,970.

Maurer et al. disclose all elements above, however do not include specific dimensions for the length and diameter of the bristles of the tufts.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to provide a bristle length in the range of about 6.7mm to about 8.6 mm in length and a bristle diameter in the range of about 0.140mm to about 0.165 mm. Applicant has not disclosed that these ranges provides an advantage, is used for a particular purpose, or solves the stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Maurer et al. because they are both toothbrush heads for electrical toothbrushes.

Art Unit: 1744

10. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being obvious over Bojar, USPN D434,565 in view of Paffrath, USPN 6,363,565.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Bojar discloses all elements above, however does not include specific dimensions for the length and diameter of the bristles of the tufts.

Art Unit: 1744

Paffrath discloses that a suitable bristle length to be in the range of 6.5 mm to about 8.5 mm (Column 4 Lines 7-10) and a suitable bristle diameter to be between 4.5 mil and 8 mil (Column 4 Lines 26-27).

It would have been obvious to one of ordinary skill in the art to use the dimensions taught by Paffrath for the brush head of Bojar to achieve the desired bristle strength.

Allowable Subject Matter

11. Claims 10-14 are allowed.
12. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
13. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art made of record comprises a plurality of tufts of bristles wherein a first one of the tufts is tilted along an imaginary radius which projects from a center of the circular surface and passes through a base of the first tuft and a second one of the tufts being tilted along an imaginary circumference which encircles the center of the circular surface and passes through a base of the second tuft. Further none of the prior art provides a third tuft tilted relative to the support member having a different length than the first and second tufts.

Applicants Arguments

14. In the response filed 22 August 2003, Paper No. 9, Applicant contends that:

Art Unit: 1744

- A. The rejection to Claim 26 under 35 U.S.C. 112 1st Paragraph is incorrect.
- B. "Round in shape" pertains to "having every part of the surface or circumference equidistant from the center."
- C. USPN 6,308,367 does not disclose a support member that is circular in shape.
- D. There is no disclosure in Cyzer that disks 7 and 7a are in the form of a "resilient cushion."
- E. Neither Berl nor Leira disclose a support member which is circular in shape.
- F. Tuft 12a is not tilted but extends perpendicular.
- G. Maurer does not indicate that the circular shaped support member is movable relative to the neck.
- H. Bojar does not include a support member which is circular in shape.
- I. Duey does not disclose a tuft tilting along an imaginary circumference which encircles the center of the circular surface.
- J. There is neather a teaching or suggestion in either the Bojar or Paffrath reference that would motivate one to modify the Bojar brush so that it has a support member which is circular.

Response to Arguments

15. Applicant's arguments A, B, C, E, F, H, I, and J, see Paper No. 9, filed 22 August 2003, with respect to the rejection(s) of claim(s) 1-28 under 35 U.S.C. 112, 35 U.S.C. 102 and 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of

Art Unit: 1744

rejection is made in view of Duey in view of Beals et al., Cyzer, Berl et al., Leira et al., and Bojar.

16. Applicant's arguments D and G filed 22 August 2003 have been fully considered but they are not persuasive.

D. Cyzer does disclose that disks 7 and 7a are in the form of a resilient cushion in that they are "loose disks" (Column 2 Line 34) and that they have "free play in all directions" (Column 2 Line 44).

G. Maurer does indicate that the circular shaped support member is movable relative to the neck (See Column 4 Lines 13-21, the embodiment used by the Examiner is what is shown in Figure 6). Figure 6 displays a pan (3) that sits in the region (1a) and is connected in a rotatable manner (Column 6 Lines 31-34).

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (703) 305-7279. The examiner can normally be reached on Monday-Thursday, 7am - 4:30pm, alternating Fridays. After December 17th, the Examiner's office will be located at the new USPTO site in Alexandria, Virginia. After this projected date, you may reach Examiner Laura Cole by phone at 571-272-1272 or by fax at 571-273-1272.

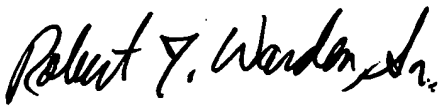
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on (703) 308-2920 (or after December 17th may be reached at 571-272-1281). The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 1744

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

LCC
LCC

20 October 2003


ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700